



UNIVERSITI PUTRA MALAYSIA

**IMPLICATIONS OF THE MIDDLE EAST EMERGING MARKETS ON
INTERNATIONAL PORTFOLIO DIVERSIFICATION**

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**IMPLICATIONS OF THE MIDDLE EAST EMERGING MARKETS ON
INTERNATIONAL PORTFOLIO DIVERSIFICATION**

By

GHOLAMREZA MANSOURFAR

**Thesis Submitted to the Graduate School of Management, Universiti Putra
Malaysia, in Fulfillment of the Requirement for the Degree of Doctor of
Philosophy**

May 2010

THIS WORK IS DEDICATED

TO

MY WIFE (FAHIMEH),

MY LOVELY SON (MOEIN),

AND

MY FATHER & MY MOTHER

WHO ENCOURAGED ME TO FULFILL MY DREAMS,

ABSTRACT

Abstract of thesis presented to the Senate of the Universiti Putra Malaysia in fulfillment
of the requirement for the degree of Doctor of Philosophy

IMPLICATIONS OF THE MIDDLE EAST EMERGING MARKETS ON INTERNATIONAL PORTFOLIO DIVERSIFICATION

By

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May 2010

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Solnik's international portfolio theory suggests more benefits from diversification if investors invest internationally. The literature highlights that diversification benefits are more significant if equity investments from emerging markets are included in international portfolios. Using two different approaches, the advanced econometric techniques and a meta-heuristic optimization algorithm, this study evaluates the potential advantages of international portfolio diversification of Middle Eastern emerging markets.

To investigate the long-run linkages and the short-run dynamics of equity markets the study relies on time series techniques of co-integration based on Vector Auto-Regressive framework, Impulse Response Functions and Variance Decompositions. For the optimization objective, Multiple-Fitness Function Genetic Algorithm procedures are applied to compute optimal portfolios based on both symmetric and asymmetric risk measurements and the long and short-run behavior of investments are investigated through the dominance of Efficient Frontiers.

The countries included in this study are expanded in five stages. In the first stage, the analysis is done among six Middle Eastern countries. It is expected that the benefits of portfolio diversification among these countries would be significantly lower as compared to a sample extended by adding countries from Middle-East and North-Africa (MENA) and East Asian equity markets. In the stage four, analyses are done by including developed markets represented by the USA, the UK and Japan. Finally in stage five, all the above regions are considered together.

The findings indicate that, contrary to expectations, the Middle East markets are not integrated regionally. For the intra-regional investments, the Middle Eastern equity markets provide more portfolio diversification benefits as compared to the emerging and developed equity markets. A vital difference between emerging and developed markets is that developed countries provide the opportunities of selecting the desired investments among a similar set of portfolio risks in both the short and long-term holding periods. However, the efficient frontiers offered by emerging markets do not have this advantage

such that the risks of their optimal portfolios are restricted either in long or short-term. For the inter-regional investments, there is evidence that investors from emerging and developed markets gain by diversifying their portfolios with Middle Eastern equity markets. However, in the long-term, the Middle Eastern equities let investors to have a wider set of investment opportunities compared to the short holding period. The findings imply that the Middle East stock markets could be used as a hedge against the risk of oil price shocks especially for oil consuming economies.

Despite the fact that Middle Eastern markets do provide opportunity for international diversification, in practice these countries are the smallest recipient of international portfolio inflows among other emerging regions. This implies that there are probably other factors, besides international diversification benefits, such as political instability, weak market micro-structure, and small market capitalization that explain the low inflow of international portfolio capital into these markets. It is crucial to note that international investors prefer to invest in markets that have low transaction costs, high market liquidity, wider choice of available investment instruments, better information dissemination, effective market regulation and trading mechanisms and selective investment restrictions need to be enforced by policy makers to make these markets more attractive for international investors.

ABSTRAK

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

IMPLIKASI DARI PASAR EMERGING TIMUR TENGAH PADA DIVERSIFIKASI PORTFOLIO ANTARABANGSA

Oleh

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Mengikut teori portfolio antarabangsa Solnik lebih banyak kelebihan kepelbagaian boleh diperoleh jika pihak pelabur membuat pelaburan di pasaran antarabangsa. Sungguhpun begitu, kajian empirik menunjukkan ini boleh dipertingkatkan jika pelaburan ekuiti daripada pasaran baru dapat disertakan ke dalam portfolio antarabangsa. Dengan mengguna teknik canggih ekonometrik dan pendekatan pengoptimuman meta-heuristik, kajian ini menilai potensi kepelbagaian portfolio antarabangsa bagi pelaburan di pasaran baru di negara-negara Timur Tengah.

Kajian ini menggunakan teknik siri-masa bagi ko-integrasi yang berasaskan kepada rangka Vektor Auto-regresi, Fungsi Gerak Balas Impuls dan Penguraian Varians bagi mengkaji kaitan jangka panjang dan jangka pendek pasaran ekuiti. Untuk mendapatkan pengoptimuman, dengan menggunakan Algoritma Genetik Fungsi Kesesuaian Berbilang, penghitungan portfolio optimum telah dibuat berasaskan kepada pengukuran risiko simetri dan tak simetri dan ragam jangka panjang dan jangka pendek pelaburan di kaji dengan cara menjelajahi kedominanan sempadan cekap. Kajian ini telah dijalankan dalam lima peringkat. Dalam peringkat pertama, analisis telah dibuat ke atas enam negara Timur Tengah. Dijangkakan bahawa kelebihan yang diperoleh dalam kepelbagaian portfolio dalam negara-negara tersebut adalah nyata lebih rendah berbanding dengan sampel yang diperkembangkan apabila pasaran-pasaran ekuiti bagi negara-negara dari Timur Tengah dan Afrika Utara telah ditambah. Dalam peringkat keempat, analisis telah dibuat dengan dilanjutkan ke pasaran-pasaran maju seperti USA, UK dan Jepun. Dalam peringkat terakhir iaitu peringkat kelima, kesemua rantau telah dipertimbangkan bersama-sama dari perspektif kepelbagaian.

Penemuan didapati bertentangan dengan jangkaan, iaitu pasaran Timur Tengah bukanlah satu rantau yang bersepadu. Bagi pelaburan intra-serantau, pasaran ekuiti Timur Tengah mampu memberi lebih banyak kelebihan kepelbagaian portfolio berbanding dengan pasaran baru muncul dan pasaran maju. Ada terdapat berbezaan penting di antara pasaran baru muncul dan pasaran maju dari segi set peluang pelaburan di mana negara-negara maju memberi peluang memilih pelaburan yang diinginkan di antara set risiko portfolio yang serupa bagi tempoh pegangan jangka pendek dan jangka panjang.

Bagaimanapun,sempadan cekap yang ditawarkan oleh pasaran baru muncul tidak mempunyai kelebihan yang tersebut sehinggakan risiko portfolio optimumnya adalah terhad bagi jangka panjang dan jangka pendek. Bagi pelaburan antara-rantau, kesemua analisis jangka panjang dan jangka pendek memberi bukti yang cukup kepada pelabur-pelabur pasaran baru muncul dan pasaran maju untuk mendapat manfaat dengan cara mempelbagaikan portfolio mereka dalam pasaran Timur Tengah. Akan tetapi, bagi jangka panjang ekuiti Timur Tengah boleh menawarkan set peluang pelaburan yang lebih luas berbanding dengan jangka pendek. Penemuan yang diperoleh juga memberi implikasi iaitu pasaran saham Timur Tengah boleh dianggap sebagai instrumen perlindungan nilai kepada risiko kejutan harga minyak lebih-lebih lagi bagi ekonomi pengguna minyak.

Sungguhpun dari segi teori pasaran Timur Tengah sangat menarik dalam menawarkan kelebihan portfolio dalaman, tetapi dari segi praktiknya mereka masih merupakan penerima terkecil aliran masuk portfolio antarabangsa berbanding dengan kawasan baru muncul yang lain. Ada faktor-faktor yang berbeza seperti kestabilan politik, kelemahan struktur pasaran mikro dan permodalan pasaran yang kecil yang telah menyebabkan kurangnya aliran masuk portfolio antarabangsa ke pasaran Timur Tengah ini. Isu-isu yang penting tersebut selain daripada keperluan-keperluan pelabur antarabangsa yang penting seperti kos transaksi yang rendah, kecairan pasaran yang tinggi, skop instrument yang luas, penyebaran maklumat yang cekap, pengawalan pasaran, mekanisme perdagangan dan sekatan pelaburan perlu ditangani oleh pihak penggubal dasar dalam usaha menarik lebih ramai pelabur antarabangsa ke pasaran kewangan negara-negara ini.

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I certify that an Examination Committee has met on 21 May 2010 to conduct the final examination of Gholamreza Mansourfar on his thesis entitled “Implications of the Middle East Emerging Markets on International Portfolio Diversification” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.



GHOLAMREZA MANSOURFAR

Date:

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